

CLAIMS

1. A polyolefin composition comprising:

(A) from 15 to 40% by weight of a crystalline copolymer of propylene with at least one alpha-olefin of formula $\text{H}_2\text{C}=\text{CHR}^1$, where R^1 is H or a C_{2-8} linear or branched alkyl, containing at least 90% by weight of propylene, having solubility in xylene at room temperature lower than 15% by weight;

(B) from 60 to 85% by weight of an elastomeric fraction comprising:

(1) a copolymer of propylene with ethylene, optionally containing 0.5 to 5% by weight of a diene, containing from 20 to 35% by weight ethylene, and having solubility in xylene at room temperature greater than 45% by weight, the intrinsic viscosity of the xylene soluble fraction ranging from 1.0 to 3.0 dl/g; and

(2) a copolymer of ethylene with at least one alpha-olefin of formula $\text{H}_2\text{C}=\text{CHR}^2$, where R^2 is a C_{2-8} linear or branched alkyl, optionally containing 0.5 to 5% by weight of a diene, containing 15% to 40% by weight alpha-olefin, and having solubility in xylene at room temperature greater than 35% by weight, the intrinsic viscosity of the xylene soluble fraction ranging from 1.0 to 3.0 dl/g;

the (1)/(2) weight ratio ranging from 1:5 to 5:1.

2. The polyolefin composition according to claim 1, wherein the amount of the crystalline copolymer (A) ranges from 20 to 35% by weight.

3. The polyolefin composition according to claim 1 or 2, wherein the crystalline copolymer (A) contains at least 95% by weight of propylene and has solubility in xylene at room temperature lower than 10% by weight.

4. The polyolefin composition according to claim 1 wherein, in the crystalline copolymer (A), said alpha-olefin is ethylene.

5. The polyolefin composition according to claim 1, wherein the copolymer (1) of fraction (B) contains from 25 to 30% by weight ethylene and has solubility in xylene at room temperature greater than 50% by weight, the intrinsic viscosity of the xylene soluble fraction ranging from 1.5 to 2.5 dl/g.

6. The polyolefin composition according to claim 1, wherein the copolymer (2) of fraction (B) contains from 20 to 35% by weight alpha-olefin and has solubility in xylene at room temperature greater than 40% by weight, the intrinsic viscosity of the xylene soluble fraction ranging from 1.5 to 2.5 dl/g.

7. The polyolefin composition according to claim 1 or 6 wherein, in the copolymer (2) of

fraction (B), said alpha-olefin is 1-butene, 1-hexene or 1-octene.

8. The polyolefin composition according to claim 1, having a flexural modulus ≤ 130 MPa, Shore D hardness ≤ 40 , and MFR ≥ 1.5 g/10min.
9. The polyolefin composition according to claim 8, wherein the flexural modulus is ≤ 100 MPa, Shore D hardness ranges from 25 to 35, and MFR is ≥ 2.0 g/10min.
10. The polyolefin composition according to claim 1, wherein the composition is obtainable by sequential polymerization in at least three stages, carried out in the presence of a catalyst comprising a trialkylaluminum compound, optionally an electron donor, and a solid catalyst component comprising a halide or halogen-alcoholate of Ti and an electron-donor compound supported on anhydrous magnesium chloride.
11. A process for the preparation of a polyolefin composition as claimed in claim 1, comprising at least three sequential polymerization stages with each subsequent polymerization being conducted in the presence of the polymeric material formed in the immediately preceding polymerization reaction, wherein the crystalline copolymer (A) is prepared in at least one first stage, and the elastomeric polymer fraction (B) is prepared in at least two sequential stages, all polymerization stages being carried out in the presence of a catalyst comprising a trialkylaluminum compound, optionally an electron donor, and a solid catalyst component comprising a halide or halogen-alcoholate of Ti and an electron-donor compound supported on anhydrous magnesium chloride, said solid catalyst component having a surface area (measured by BET) of less than $200 \text{ m}^2/\text{g}$, and a porosity (measured by BET) greater than 0.2 ml/g .
12. The process according to claim 11, wherein the sequential polymerization stages are all carried out in gas phase.
13. Films and sheets comprising the polyolefin composition of claim 1.
14. A cast film comprising the polyolefin composition of claim 1.